

EX04-037patentin
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1020 Rec'd PCT/PTO 1 0 NOV 2009

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EX04-037patentin.txt

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Ile Cys Thr Tyr Ile Asn Val Gln Glu Arg Asp Pro Lys Ala His Arg
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Leu Ile Ala Phe Gln Val Pro Arg Pro Lys Ile Lys Leu Ile Lys Gly
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Ser Leu Gln His Leu Thr Trp Leu Gly Leu Gln Trp Asn Ser Leu Pro
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Ala Leu Pro Gly Ile Arg Lys Trp Leu Lys Gln Leu Phe His His Leu
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Pro His Glu Thr Ser Arg Leu Glu Thr Asn Ala Pro Glu Ser Ile Cys
Page 19

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Ser Ile Lys Ser Val Val Ser Tyr Trp Asn Leu Ala Leu Ile Phe His
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Arg Lys Ala Glu Asp Ile Glu Asn Asp Ala Leu Ser Pro Glu Glu Gln
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Glu Glu Cys Lys Asn Tyr Leu Arg Lys Thr Arg Asp Tyr Leu Ile Lys
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Pro Val Val Pro Leu Pro Asp Lys Ile Glu Val Lys Thr Gly Glu
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Glu Asp Glu Glu Glu Phe Phe Cys Asn Arg Ala Lys Leu Phe Arg
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Phe Asp Val Glu Ser Lys Glu Trp Lys Glu Arg Gly Ile Gly Asn
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 Page 23

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Ser Gly Phe Glu Asp Met Phe Ala Lys Lys Glu Gly Gln Trp Asp	1535	1540	1545		
Cys Ser Ser Cys Leu Val Arg Asn Glu Ala Asn Ala Thr Arg Cys	1550	1555	1560		
Val Ala Cys Gln Asn Pro Asp Lys Pro Ser Pro Ser Thr Ser Val	1565	1570	1575		
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Ala Pro Lys Ser Gly Phe Glu Gly Met Phe Thr Lys Lys Glu Gly	1595	1600	1605		
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Thr Ser Ala Val Ser Thr Pro Ala Ser Ser Glu Thr Ser Lys Ala	1640	1645	1650		
Pro Lys Ser Gly Phe Glu Gly Met Phe Thr Lys Lys Glu Gly Gln	1655	1660	1665		
Trp Asp Cys Ser Val Cys Leu Val Arg Asn Glu Ala Ser Ala Thr	1670	1675	1680		

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 2000 2005 2010
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Trp	Asp	Asn	Tyr	Asp	Leu	Arg	Glu	Asp	Ala	Leu	Asp	Asp	Ser	Val
	2225					2230					2235			
Ser	Ser	Ser	Ser	Val	His	Ala	Ser	Pro	Leu	Ala	Ser	Ser	Pro	Val
	2240					2245					2250			
Arg	Lys	Asn	Leu	Phe	Arg	Phe	Gly	Glu	Ser	Thr	Thr	Gly	Phe	Asn
	2255					2260					2265			
Phe	Ser	Phe	Lys	Ser	Ala	Leu	Ser	Pro	Ser	Lys	Ser	Pro	Ala	Lys
	2270					2275					2280			
Leu	Asn	Gln	Ser	Gly	Thr	Ser	Val	Gly	Thr	Asp	Glu	Glu	Ser	Asp
	2285					2290					2295			
Val	Thr	Gln	Glu	Glu	Glu	Arg	Asp	Gly	Gln	Tyr	Phe	Glu	Pro	Val
	2300					2305					2310			
Val	Pro	Leu	Pro	Asp	Leu	Val	Glu	Val	Ser	Ser	Gly	Glu	Glu	Asn
	2315					2320					2325			
Glu	Gln	Val	Val	Phe	Ser	His	Arg	Ala	Lys	Leu	Tyr	Arg	Tyr	Asp
	2330					2335					2340			
Lys	Asp	Val	Gly	Gln	Trp	Lys	Glu	Arg	Gly	Ile	Gly	Asp	Ile	Lys
	2345					2350					2355			
Ile	Leu	Gln	Asn	Tyr	Asp	Asn	Lys	Gln	Val	Arg	Ile	Val	Met	Arg
	2360					2365					2370			
Arg	Asp	Gln	Val	Leu	Lys	Leu	Cys	Ala	Asn	His	Arg	Ile	Thr	Pro
	2375					2380					2385			
Asp	Met	Thr	Leu	Gln	Asn	Met	Lys	Gly	Thr	Glu	Arg	Val	Trp	Leu

2390		2395		2400
Trp Thr	Ala Cys Asp Phe	Ala Asp Gly Glu Arg	Lys Val Glu His	
2405		2410	2415	
Leu Ala	Val Arg Phe Lys	Leu Gln Asp Val Ala	Asp Ser Phe Lys	
2420		2425	2430	
Lys Ile	Phe Asp Glu Ala	Lys Thr Ala Gln Glu	Lys Asp Ser Leu	
2435		2440	2445	
Ile Thr	Pro His Val Ser	Arg Ser Ser Thr Pro	Arg Glu Ser Pro	
2450		2455	2460	
Cys Gly	Lys Ile Ala Val	Ala Val Leu Glu Glu	Thr Thr Arg Glu	
2465		2470	2475	
Arg Thr	Asp Val Ile Gln	Gly Asp Asp Val Ala	Asp Ala Thr Ser	
2480		2485	2490	
Glu Val	Glu Val Ser Ser	Thr Ser Glu Thr Thr	Pro Lys Ala Val	
2495		2500	2505	
Val Ser	Pro Pro Lys Phe	Val Phe Gly Ser Glu	Ser Val Lys Ser	
2510		2515	2520	
Ile Phe	Ser Ser Glu Lys	Ser Lys Pro Phe Ala	Phe Gly Asn Ser	
2525		2530	2535	
Ser Ala	Thr Gly Ser Leu	Phe Gly Phe Ser Phe	Asn Ala Pro Leu	
2540		2545	2550	
Lys Ser	Asn Asn Ser Glu	Thr Ser Ser Val Ala	Gln Ser Gly Ser	
2555		2560	2565	
Glu Ser	Lys Val Glu Pro	Lys Lys Cys Glu Leu	Ser Lys Asn Ser	
2570		2575	2580	
Asp Ile	Glu Gln Ser Ser	Asp Ser Lys Val Lys	Asn Leu Phe Ala	
2585		2590	2595	
Ser Phe	Pro Thr Glu Glu	Ser Ser Ile Asn Tyr	Thr Phe Lys Thr	
2600		2605	2610	
Pro Glu	Lys Ala Lys Glu	Lys Lys Pro Glu	Asp Ser Pro Ser	
2615		2620	2625	

Asp Asp Val Leu Ile Val Tyr Glu Leu Thr Pro Thr Ala Glu
 2630 2635 2640
 Gln Lys Ala Leu Ala Thr Lys Leu Lys Leu Pro Pro Thr Phe Phe
 2645 2650 2655
 Cys Tyr Lys Asn Arg Pro Asp Tyr Val Ser Glu Glu Glu Glu Asp
 2660 2665 2670
 Asp Glu Asp Phe Glu Thr Ala Val Lys Lys Leu Asn Gly Lys Leu
 2675 2680 2685
 Tyr Leu Asp Gly Ser Glu Lys Cys Arg Pro Leu Glu Glu Asn Thr
 2690 2695 2700
 Ala Asp Asn Glu Lys Glu Cys Ile Ile Val Trp Glu Lys Lys Pro
 2705 2710 2715
 Thr Val Glu Glu Lys Ala Lys Ala Asp Thr Leu Lys Leu Pro Pro
 2720 2725 2730
 Thr Phe Phe Cys Gly Val Cys Ser Asp Thr Asp Glu Asp Asn Gly
 2735 2740 2745
 Asn Gly Glu Asp Phe Gln Ser Glu Leu Gln Lys Val Gln Glu Ala
 2750 2755 2760
 Gln Lys Ser Gln Thr Glu Glu Ile Thr Ser Thr Thr Asp Ser Val
 2765 2770 2775
 Tyr Thr Gly Gly Thr Glu Val Met Val Pro Ser Phe Cys Lys Ser
 2780 2785 2790
 Glu Glu Pro Asp Ser Ile Thr Lys Ser Ile Ser Ser Pro Ser Val
 2795 2800 2805
 Ser Ser Glu Thr Met Asp Lys Pro Val Asp Leu Ser Thr Arg Lys
 2810 2815 2820
 Glu Ile Asp Thr Asp Ser Thr Ser Gln Gly Glu Ser Lys Ile Val
 2825 2830 2835
 Ser Phe Gly Phe Gly Ser Ser Thr Gly Leu Ser Phe Ala Asp Leu
 2840 2845 2850
 Ala Ser Ser Asn Ser Gly Asp Phe Ala Phe Gly Ser Lys Asp Lys
 2855 2860 2865

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Asn Phe Gln Trp Ala Asn Thr Gly Ala Ala Val Phe Gly Thr Gln
 2870 2875 2880
 Ser Val Gly Thr Gln Ser Ala Gly Lys Val Gly Glu Asp Glu Asp
 2885 2890 2895
 Gly Ser Asp Glu Glu Val Val His Asn Glu Asp Ile His Phe Glu
 2900 2905 2910
 Pro Ile Val Ser Leu Pro Glu Val Glu Val Lys Ser Gly Glu Glu
 2915 2920 2925
 Asp Glu Glu Ile Leu Phe Lys Glu Arg Ala Lys Leu Tyr Arg Trp
 2930 2935 2940
 Asp Arg Asp Val Ser Gln Trp Lys Glu Arg Gly Val Gly Asp Ile
 2945 2950 2955
 Lys Ile Leu Trp His Thr Met Lys Asn Tyr Tyr Arg Ile Leu Met
 2960 2965 2970
 Arg Arg Asp Gln Val Phe Lys Val Cys Ala Asn His Val Ile Thr
 2975 2980 2985
 Lys Thr Met Glu Leu Lys Pro Leu Asn Val Ser Asn Asn Ala Leu
 2990 2995 3000
 Val Trp Thr Ala Ser Asp Tyr Ala Asp Gly Glu Ala Lys Val Glu
 3005 3010 3015
 Gln Leu Ala Val Arg Phe Lys Thr Lys Glu Val Ala Asp Cys Phe
 3020 3025 3030
 Lys Lys Thr Phe Glu Glu Cys Gln Gln Asn Leu Met Lys Leu Gln
 3035 3040 3045
 Lys Gly His Val Ser Leu Ala Ala Glu Leu Ser Lys Glu Thr Asn
 3050 3055 3060
 Pro Val Val Phe Phe Asp Val Cys Ala Asp Gly Glu Pro Leu Gly
 3065 3070 3075
 Arg Ile Thr Met Glu Leu Phe Ser Asn Ile Val Pro Arg Thr Ala
 3080 3085 3090
 Glu Asn Phe Arg Ala Leu Cys Thr Gly Glu Lys Gly Phe Gly Phe
 3095 3100 3105

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Lys Asn Ser Ile Phe His Arg Val Ile Pro Asp Phe Val Cys Gln
3110 3115 3120

Gly Gly Asp Ile Thr Lys His Asp Gly Thr Gly Gly Gln Ser Ile
3125 3130 3135

Tyr Gly Asp Lys Phe Glu Asp Glu Asn Phe Asp Val Lys His Thr
3140 3145 3150

Gly Pro Gly Leu Leu Ser Met Ala Asn Gln Gly Gln Asn Thr Asn
3155 3160 3165

Asn Ser Gln Phe Val Ile Thr Leu Lys Lys Ala Glu His Leu Asp
3170 3175 3180

Phe Lys His Val Val Phe Gly Phe Val Lys Asp Gly Met Asp Thr
3185 3190 3195

Val Lys Lys Ile Glu Ser Phe Gly Ser Pro Lys Gly Ser Val Cys
3200 3205 3210

Arg Arg Ile Thr Ile Thr Glu Cys Gly Gln Ile
3215 3220